

Attorney Docket No.: DEX0499US.NP
Inventors: Fan et al.
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This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claim 1 (original): An antibody produced by a hybridoma of American Type Culture Collection accession number PTA-5878, PTA-5879, PTA-6146, PTA-6147 and PTA-6629 or which competes for binding to a same epitope as the epitope bound by the antibody produced by a hybridoma of American Type Culture Collection accession number PTA-5878, PTA-5879, PTA-6146, PTA-6147 and PTA-6629.

Claim 2 (currently amended): The antibody of claim 1 which is a monoclonal antibody, an antibody fragment of a chimeric or humanized antibody.

Claim 3-4 (canceled)

Claim 5 (original): The antibody of claim 1 which is produced by immunization with Lng105 protein.

Claim 6 (original): The antibody of claim 1 which binds to native Lng105 protein.

Claim 7 (canceled)

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Claim 8 (currently amended): The antibody of claim 1 further comprising a growth inhibitory agent, an imaging agent or a cytotoxic agent conjugated thereto.

Claim 9-10 (canceled)

Claim 11 (currently amended): The antibody of ~~claim 10~~ claim 8 wherein the cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

Claim 12 (canceled)

Claim 13 (currently amended): The antibody of ~~claim 12~~ claim 11, wherein the toxin is selected from the group consisting of a ricin, saponin, maytansinoid and calicheamicin.

Claim 14 (canceled)

Claim 15 (original): The antibody of claim 1 that selectively binds Lng105 in a bodily fluid.

Claim 16 (original): The antibody of claim 1 that selectively binds a Lng105-expressing cell.

Claim 17 (original): The antibody of claim 1 that inhibits the growth of a Lng105-expressing cell.

Claim 18-20 (canceled)

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Claim 21 (original): The antibody of claim 16, wherein the Lng105-expressing cell is a cancer cell.

Claim 22 (original): The antibody of claim 21, wherein the cancer cell is from a cancer comprising lung or breast cancer.

Claim 23 (canceled)

Claim 24 (original): A cell that produces the antibody of claim 1.

Claim 25 (canceled)

Claim 26 (original): A method of producing the antibody of claim 1 comprising culturing an appropriate cell and recovering the antibody from the cell culture.

Claim 27 (currently amended): A composition comprising the antibody of ~~any of claims 1-23~~ claim 1, and a carrier.

Claim 28 (currently amended): The composition of claim 27, wherein the antibody is conjugated to an imaging agent or a cytotoxic agent.

Claim 29 (canceled)

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Claim 30 (original): The composition of claim 28, wherein the cytotoxic agent is a ricin, saponin, maytansinoid and calicheamicin.

Claim 31-33 (canceled)

Claim 34 (original): A method of killing an Lng105-expressing cancer cell, comprising contacting the cancer cell with the antibody of claim 1, thereby killing the cancer cell.

Claim 35 (original): The method of claim 34, wherein the cancer cell comprises a lung or breast cancer cell.

Claim 36 (original): The method of claim 35, wherein the cancer cell is from metastatic lung or breast cancer.

Claim 37-38 (canceled)

Claim 39 (original): The method of claim 34, wherein the antibody is conjugated to a cytotoxic agent.

Claim 40 (currently amended): The method of claim 39, wherein the cytotoxic agent is a toxin selected from the group consisting of maytansinoid, ricin, saporin and calicheamicin or a radioactive isotope.

Claim 41-42 (canceled)

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Claim 43 (original): A method of alleviating a Lng105-expressing cancer in a mammal, comprising administering a therapeutically effective amount of the antibody of claim 1 to the mammal.

Claim 44 (original): The method of claim 43, wherein the cancer comprises lung or breast cancer.

Claim 45-47 (canceled)

Claim 48 (original): The method of claim 43, wherein the antibody is administered in conjunction with at least one chemotherapeutic agent.

Claim 49 (original): The method of claim 48 wherein the chemotherapeutic agent is paclitaxel or a derivative thereof.

Claim 50 (original): An article of manufacture comprising a container and a composition contained therein, wherein the composition comprises an antibody of claim 1.

Claim 51 (original): The article of manufacture of claim 50 further comprising a package insert indicating that the composition can be used to diagnose, image or treat lung or breast cancer.

Claim 52 (original): A method for determining if cells in a sample express Lng105 comprising

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(a) contacting a sample of cells with the antibody of claim 1 under conditions suitable for specific binding of the antibody to Lng105 and

(b) determining the level of binding of the antibody of claim 1 to cells in the sample, or the level of antibody internalization of the antibody of claim 1 by cells in said sample,

wherein antibody binding of the antibody of claim 1 to cells in the sample or internalization of the antibody of claim 1 by cells in the sample indicate cells in the sample express Lng105.

Claim 53-55 (canceled)

Claim 56 (original): The method of claim 52 wherein the cancer comprises a lung or breast cancer.

Claim 57 (canceled)

Claim 58 (original): A method for detecting Lng105 overexpression in a test cell sample, comprising:

(a) combining a test cell sample with the antibody of claim 1 under conditions suitable for specific binding of the antibody of claim 1 to Lng105 expressed by cells in said test sample;

(b) determining the level of binding of the antibody of claim 1 to the cells in the test sample; and

(c) comparing the level of antibody of claim 1 bound to the cells in step (b) to the level of antibody binding of the antibody of claim 1 to cells in a control cell sample,

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wherein an increase in the binding of the antibody of claim 1 in the test cell sample as compared to the control is indicative of Lngl05 overexpression by cells in the test cell sample.

Claim 59-61 (canceled)

Claim 62 (original): A method for detecting Lngl05 overexpression in a subject in need thereof comprising:

- (a) combining a bodily fluid sample of a subject with the antibody of claim 1 under conditions suitable for specific binding of the antibody of claim 1 to Lngl05 in said serum sample;
- (b) determining the level of Lngl05 in the bodily fluid sample; and
- (c) comparing the level of Lngl05 determined in step (b) to the level of Lngl05 in a control;

wherein an increase in the level of Lngl05 in the bodily fluid sample from the subject as compared to the control is indicative of Lngl05 overexpression in the subject.

Claim 63-66 (canceled)

Claim 67 (original): The method of claim 62 wherein the method utilizes a plurality of anti-Lngl05 antibodies.

Claim 68 (original): The method of claim 67 wherein the antibodies are produced by a hybridoma selected from the group comprising PTA-5878, PTA-5879, PTA-6146 and PTA-6147.

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Claim 69-70 (canceled)

Claim 71 (original): A screening method for antibodies that bind to an epitope which is bound by an antibody of claim 1 comprising,:

- (a) combining a Lng105-containing sample with a test antibody and an antibody of claim 1 to form a mixture ;
 - (b) determining the level of antibody of claim 1 bound to Lng105 in the mixture; and
 - (c) comparing the level of antibody of claim 1 bound in the mixture of step (a) to a control mixture;
- wherein the level of antibody binding of the antibody of claim 1 to Lng105 in the mixture as compared to the control is indicative of the test antibody's binding to a same epitope that is bound by the antibody of claim 1.

Claim 72-76 (canceled)